Enabling Flash **Recognition** on a TL70

Technical Note

Enabling Flash State **Recognition** on a TL70 Wireless Tower Light

This document provides instructions on how to enable the TL70 Wireless Tower Light to recognize a 0.8 Hz to 6 Hz flashing state produced on the input. This feature allows each light segment to have two separate states that can be recognized and tracked for reporting or triggering rules or functions within the DXM100 Wireless Controller.

To enable the flash state recognition, change the Report Type and I/O Configuration using the DX80 User Configuration Tool. The TL70 must be bound to either the DXM100 or a DX80 Gateway.

👉 Important: If using the Machine Monitoring / OEE Solutions Guide, this Tech Note DOES NOT need to be followed as the script loaded into the file will automatically do this for any TL70 Wireless Tower Light bound to the DXM.

Equipment Used

- DXM100 OR DX80 Performance Series Gateway (either 900 MHz or 2.4 GHz)
- TL70DXNx TL70 Wireless Tower Light (900 MHz or 2.4 GHz to match the DXM100 or Gateway) with RF Firmware version 6.4 or higher

Configure for Flashing **Recognition**

1. Download the *DX80 User Configuration Tool v2* (UCT) from Banner website and install on computer.
2. Apply power to the DXM or DX80 Gateway and the TL70 Wireless Tower Light.
3. Follow binding procedures listed on the TL70 datasheet to bind the Node to the Gateway.
4. Using a USB cable, connect the Gateway to the computer with UCT installed.
5. Connect the UCT to the Gateway going to the Device > **Connection Settings** menu.
6. Select Serial if using a DX80 Gateway or Serial DXM if using the DXM100. Select the COM port the USB cable is plugged into and click Connect. If you are unsure which COM port and multiple appear, attempt to connect to each one of them until you are successful.
7. Go to the **Configuration** screen and select Nodes Currently in the System from the drop-down list. Click Get devices in system.
8. Use the arrow next to the Node(s) that appear below the Gateway bar to expand the Node's parameters.
9. Read the current parameters for each input of the Node. Click GET next to that input. This takes less than one minute for each GET.
10. For each input (1 through 6) that needs to recognize flashing states, use the arrow next to that input to expand its parameters.
    a. Under I/O **configuration**, change the Report Type to Analog
    b. Under Serial **options** change the IO **configuration** to 24
11. Click SEND next to that updated input to send the new parameters to the device.
12. Repeat steps 9 through 11 for each input and Node that needs to recognize a flashing input.

Flashing Input States

Typical TL70 Wireless Tower Lights only indicate an ON or OFF state via a 1 or 0 when reading the input status for each light module. With the flashing input updates as described are applied, the unit displays four different states when reading the input status:
- 0 - OFF state
- 1 - ON state
- 2 - FLASHING OFF State
- 3 - FLASHING ON State

The input status 2 and 3 rotate back and forth as long as the light recognizes an input that is transitioning between ON and OFF at a frequency of at least 0.8 Hz and no faster than 6 Hz. If the input is transitioning slower than 0.8 Hz or faster than 6 Hz it may not display the input FLASHING status correctly.